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ABSTRACT

The result of a pilot study funded by the Library Services and Construction Act (LSCA), this document is both a report of a test of adaptations of "Output Measures for Public Libraries" for the measurement of children's services in Wisconsin public libraries, and a manual for children's librarians to use for future data collection. The material is intended to supplement "Output Measures for Public Libraries: A Manual of Standardized Procedures" (Zweizig and Rodger, 1982), and the numbers of the measures and page number references refer to that document. Measurement issues and sample sizes are discussed, and a three-phase pattern for gathering information is provided. Reports are then presented on the following measures used in this project: (1) Measure 1--Juvenile Circulation per Juvenile Capita; (2) Measure 2--In-Library Use of Juvenile Library Materials per Juvenile Capita; (3) Measure 3--Juvenile Library Visits per Juvenile Capita; (4) Measure 4--Annual Juvenile Program Attendance per Juvenile Capita; (5) Measure 6--Reference Fill Rate for Juveniles; (6) Measure 10--Library Registration of Juveniles as a Percentage of Juvenile Population; and (7) Measure 11--Turnover Rate of Juvenile Materials. Samples of forms used in the study are provided, including summary sheets for recording data on elements and output measures, and for reporting the collection experience. Additional data are summarized in three tables. (KM)

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OUTPUT MEASURES FOR CHILDREN'S SERVICES IN WISCONSIN PUBLIC LIBRARIES: A PILOT PROJECT--1984-85

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AN LSCA (LIBRARY SERVICES AND CONSTRUCTION ACT) **PROJECT FUNDED THROUGH THE WISCONSIN DIVISION FOR LIBRARY SERVICES**

Madison, Wisconsin
June 30, 1985

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Library name	Wisconsin community	Library contact person	System contact person
Arabut Ludlow Memorial Library	Monroe	Margaret Howden	Bill Rettig
Algoma Public Library	Algoma	Mary Mayheu	
Appleton Public Library	Appleton	Carole DeJardin	
Darlington Public Library	Darlington	Marion Howard	Heather Wagner
Duerrwaechter Memorial Library	Germantown	Kay Antoine	
Finney Public Library	Clintonville	Kathy Mitchell	Marsha Rossiter
Janesville Public Library	Janesville	Catherine Norris	
L. E. Phillips Memorial Library	Eau Claire	Helen Mabrey	Sandra Robbers
LaCrosse Public Library	LaCrosse	Carol Erickson	
Madison Public Library	Madison	Barbara Dimick	
Manitowoc Public Library	Manitowoc	Kathleen Thomson	
Marathon County Public Library	Wausau	Sonja Nelson	Michelle Seipp
Martin Luther King Library	Milwaukee	Kathie Staszak	Jane Botham
Maude Shunk Youth Library	Menomonee Falls	Pat Bakula	
Mead Public Library	Sheboygan	Kay Knauer	
Neenah Public Library	Neenah	Mary Jane Wiseman	
Oak Creek Public Library	Oak Creek	Orchard Utzinger	
Oshkosh Public Library	Oshkosh	Sarah McCarville	
Superior Public Library	Superior	Sue Johnsted	Joan Airoldi
Waukesha Public Library	Waukesha	Jane Byers-Ameel	
		Margaret Kindshi	

In addition, the following people participated in the meetings:

Lucy Beck, Head of Children's Services, Kenosha

Anders Dahlgren, Division for Library Services, Wisconsin Department of Public Instruction

Barbara Davis, Children's Librarian, Lake Geneva Public Library

Kathy Hay, ALA Student Chapter representative, School of Library and Information Studies, UW-Madison

Gertrude Herman, CCBC Board representative, School of Library and Information Studies, UW-Madison

Project Description

This report is the result of a pilot study of the use of output measures for measuring children's services in Wisconsin public libraries which took place in March-April, 1985.

This project is part of a long-term effort on the part of Wisconsin children's librarians to improve the measurement and planning of services. In 1979, children's librarians conducted a two-day review and discussion of services. In 1981, a statewide survey of children's librarians identified the need for improved administrative and management skills. In February, 1984, a group of 24 Wisconsin children's and young adult librarians met again to discuss services. This group was especially concerned about gathering data which would be useful in documenting efforts to improve services. Members had heard about output measures, and they wanted to know more about them so they instructed the state outreach consultant to write an LSCA (Library Services and Construction Act) grant application which would provide them with a continuing education experience to learn about output measures and also the opportunity to test the measures with children. The grant was written, awarded, and implemented during FY 1985.

The staff consisted of Gloria A. Waity, Cooperative Children's Book Center (CCBC) Outreach Consultant and Project Administrator; Joan A. Braune, Project Coordinator; and Douglas L. Zweizig, Project Consultant. Waity wrote the grant application and was responsible for administration and coordination with the children's librarians. Braune was responsible for the organization of the meetings, preparation of project materials, and project communications. Zweizig provided training and consultation at the three meetings and is the author of the draft manual that was tested and of this report. The measures themselves were conducted by the librarians listed in the Acknowledgements. They represent libraries from almost every one of the 17 regional library systems in Wisconsin. The project staff members functioned as organizers and educators, but the project itself belonged to the librarians. The staff consulted with them, but group decisions as to what measures would be implemented, what definitions would be used, and other such decisions were made by the librarians. Because of the group decision-making and because this was not a project or an activity imposed upon them by an outside authority, a strong sense of ownership of the adapted measures and the statistics which composed the data occurred.

Decisions on what to measure and how to measure it were made during the group meetings. Three were scheduled as part of the project, but any group wishing to replicate the experience would be wise to plan four sessions. At the first meeting, philosophical discussions of the purposes of children's services, questions about the key indicators of service, and doubts about the feasibility of measurement were aired. Because people had not actually participated in such data collection, there was a need for theoretical background and explanation which was provided by Zweizig. It was necessary for the group to look at and reach concensus on terminology and service questions. Considerable discussion about the use by adults of children's materials and services occurred in examining each measure. It reflected the knowledge that children's librarians serve children both directly and indirectly through service to parents and other adults.

At the second meeting, methodology was emphasized as proposed adaptations were discussed. The measures were then performed in 20 libraries, using a draft manual of adaptations of measures prepared by Zweizig. In addition to reporting results of the measurement, librarians were asked to report on the experience of obtaining each data element (See sample REPORT FORM ON EXPERIENCE IN COLLECTING DATA ELEMENTS on p. 36.) and overall reactions to the data collection process (See GENERAL OBSERVATIONS ON THE DATA COLLECTION EXPERIENCE AND SUGGESTIONS FOR IMPROVEMENTS AND SHORT-CUTS, p. 36, and POSITIVE OBSERVATIONS ON THE DATA COLLECTION EXPERIENCE, p. 37.) These reports were used by Zweizig to identify problems and to propose solutions. At the third meeting, the data were presented, and discussion and recommendations for changes in the data collection forms occurred.

In some cases, individual libraries collected the data as the group had decided, but with slight additions so that they could be interpreted for the group study and also in a way which reflected the individual library's needs. Their ability to do this supports the adaptability of the output measures methodology and the usefulness of the forms used. There was not enough time in the third meeting to thoroughly discuss the data and to draw conclusions about what the information told libraries, individually and collectively, about the state of children's services. For this reason, it is recommended that a fourth meeting of participants would be important.

This is a progress report. The data included should be viewed as results of the process, not as base-line data, although those Wisconsin libraries repeating the collection will be able to use it to build on and for comparison. But because this is a testing experience--to see how the forms adapted for children's services really worked, to see how the librarians and their staffs used the forms and the experience, and to see how children respond to such data gathering--some changes in the final product have been recommended and incorporated in the body of this report.

The children's librarians who participated in this test project have indicated an extremely positive response to this process. Many of them have plans to repeat the process. It is too early in the process and data from a single measurement period are too limited to come to conclusions about children's services in Wisconsin. However, on the basis of the enthusiasm for this method of collection expressed by the participants, it is hoped that in 1986 systematic collection of data for children's services will begin.

Gloria A. Waity
Project Administrator

Introduction

This document is both a report of a test of adaptations of Output Measures for Public Libraries for the measurement of children's services and a manual for children's librarians to use for future data collection. The appropriateness of the measurement procedures in the manual is the result of the field testing by and recommendations of the children's librarians in Wisconsin.

The material in this manual is intended to supplement the OMPL manual, Output Measures for Public Libraries: A Manual of Standardized Procedures (Douglas Zweizig and Eleanor Jo Rodger; Chicago, American Library Association, 1982). The numbers of the measures and the page numbers references in this publication are to that manual. The OMPL manual should be consulted for fuller explanation of each of the data collection procedures.

Output measures are standardized indicators of the services a public library provides to its community. In order to aid comparison among libraries and across time, they are expressed as ratios to adjust, for example, for different sizes of populations served. The figures which form the output measures ratios are referred to as data elements. Juvenile circulation per juvenile capita, for instance, is made up of the data elements of Annual circulation of juvenile materials and Juvenile population in the jurisdiction served. The data collection procedures in this manual are for the collection of the data elements. The resulting output measure is produced by dividing one data element by another.

The determination of definitions for measures of services involves many compromises, and many difficult definition problems remain. Probably the most problematic is that of the population served. Even though libraries receive the greater part of their support from a locality, a significant proportion of their service may be to residents of nearby communities or unincorporated areas. The considerations that resulted in the use of the population of the primary jurisdiction as the data element were that this figure would be used for other municipal services, that it was the figure most meaningful for the primary funders, and that it was the most unambiguous of the definitions considered. The addition of a percentage of the service that is to non-residents (in Tables 1 through 4 and Table 10) aids in the interpretation of the per capita measures.

In order for data to be interpreted, they must have a basis for comparison: last year's data, the target level set in the library's objectives, or the like. Next year, when this data collection is repeated, librarians will be able to observe the directions in which the measures are moving. At this time, the only comparison set of data available is from a national gathering of output measures reported in 1983 (to be found in Table 9). In the comments on the measures from this project, these national data for total libraries (in contrast to data for children's services) are used to provide some context for interpretation.

The librarians who participated in this project moved from an initial uncertainty about the feasibility and usefulness of the output measures process to an enthusiasm tempered by experience with the complexities of measurement. They asked that a quotation from an English judge on the quality of statistics from India be included in this report:

> The government are very keen on amassing statistics. They collect them, add them, raise them to the nth power, take the cube root, and prepare wonderful diagrams. But you must never forget that every one of these figures comes in the first instance from the village watchman, who just puts down what he damn pleases.

Douglas L. Zweizig
School of Library and Information Studies
University of Wisconsin--Madison

OUTPUT MEASURES FOR MEASUREMENT OF CHILDREN'S SERVICES: MEASURES USED IN THIS PROJECT

Measure 1: Juvenile Circulation per Juvenile capita:

Annual Circulation of Juvenile Materials divided by Juvenile Population.

Measure 2: In-library use of Juvenile Materials per Juvenile Capita:

Annual in-library use of Juvenile Materials divided by Juvenile Population.

Measure 3: Juvenile Library Visits per Juvenile Capita:

Annual Number of Juvenile Library Visits divided by Juvenile Population.

Measure 4: Annual Juvenile Program Attendance per Juvenile Capita:

Annual Juvenile Program Attendance divided by Juvenile Population.

Measure 6: Reference Fill Rate for Juveniles:

Number of Reference Transactions Completed for Juveniles divided by Number of Reference Transactions for Juveniles.

Measure 10: Library Registration of Juveniles as a Percentage of Juvenile population:

Library Registration of Juveniles divided by Juvenile Population.

Measure 11: Turnover Rate of Juvenile Materials:

Annual Circulation of Juvenile Materials divided by Holdings of Juvenile Materials.

ISSUES IN MEASUREMENT OF CHILDREN'S SERVICES

Why measure children's services separately? A public library, though a single institution, is a complex of services for clientele with differing needs. Lowell Martin enumerated seven quite distinct roles played by public libraries: The People's University, the student's auxiliary, the children's door to reading, the free bookstore, the information agency, the scholar's workshop, and the community center. Measures of the output of the library as a whole can give only a general sense of the contribution of the library and cannot provide the management information that will allow the library to determine its effectiveness in the roles it chooses to emphasize. The output measures manual included Second Level measures for those libraries that wished to go beyond the general, initial measures. Many of the Second Level measures involved looking separately at services to children.

Why are the services provided during the summer months being ignored in this project? There is no question that the pattern of children's services is different during the summer months. In order to have a full sense of children's services, a separate study of output measures during the summer would be required. This project is an exploration of the feasibility of adapting output measures to children's services. After the measures are tried this spring and revised, those measures that have been successful may be used in the summer in a continuation of the project.

What are the advantages of sampling? How do we know that sampling provides better information than counting everything? Most books on sampling tell how to sample and neglect to say why. Morris James Slocum's Sampling: a quick, reliable guide to practical statistics (N.Y., Simon and Schuster, 1960 [originally published as Sampling in a nutshell]) continues to be used as a commonsense explanation of both the why and the how:

> A natural and legitimate question that many readers will ask is, "What advantages does a sample possess over a complete count?" The answer in brief is that sampling often permits the executive to cut costs, reduce manpower requirements, gather vital information more quickly, obtain data that could not possibly be available otherwise, obtain more comprehensive data, and actually increase the accuracy of his figures in some instances. In addition, some sampling methods make it possible to measure the reliability of the sample estimates from the sample itself. . . . Anyone who is of the notion that 100 per cent count automatically provides the true figure should try counting and re-counting a heap of boiled peas the size of a dunce cap until he gets the same total twice.

If you're intrigued by this question, you may want to locate a copy of Slocum's book.

A NOTE ON SAMPLE SIZES

The numbers indicated in the manual for sample sizes have been based on the assumption that the samples will be drawn from a large number of items: in sampling items requested for document delivery, we have assumed that a large number of items are requested; in sampling titles sought for title availability, we have assumed that a large number of titles are sought each year; and so on. If your library is small, you may be able to reduce the number required in the sample. To decide whether this is possible, you first need to think about the data element being collected, and answer the following questions:

- Regarding in-library materials use:
  Are less than 2,000 items used in my library each year? ___ Yes ___ No
- Regarding annual number of library visits:
  Did the library have less than 2,000 visits last year? ___ Yes ___ No
- Regarding annual number of reference transactions:
  Did we have less than 2,000 reference transactions last year? ___ Yes ___ No
- Regarding annual number of titles sought:
  Did users seek less than 2,000 specific items (known titles) last year? ___ Yes ___ No
- Regarding annual number of subjects and authors sought:
  Did users seek less than 2,000 specific subjects or authors last year? ___ Yes ___ No
- Regarding annual number of browsers:
  Did less than 2,000 users browse last year? ___ Yes ___ No
- Regarding annual requests for materials not immediately available:
  Were less than 2,000 items not immediately available requested last year? ___ Yes ___ No

For each of these questions, it's o.k. to make a guess. For example, if you're open 300 days in a year, you might ask, "Is it likely that on an average day less than seven items were used in the library?"

For any of the above questions to which you answered "No," the sample size should be the one recommended in the manual, generally a minimum sample of 100 items. For any of the above questions to which you answered "Yes," you can reduce the sample size for that data element depending on how much below 2,000 you think your number is, as follows:

Number of Items Estimated	Number of Items Needed in Sample
2,000	95
1,000	90
500	80
250	60

For example, the library that estimates that about 1,000 items were used in the library last year would only need a sample of 90 items in the in-library materials use study.

SUGGESTED ORDER FOR GATHERING OUTPUT MEASURES DATA

Most libraries have said that they plan to collect the data in a one-week period. If the data could be gathered in several phases, some confusion and overload of the staff may be avoided. A pattern has been suggested below. The pattern can be modified in order to best meet your needs and schedule.

Phase 1 (Preparation):

Inform staff and others involved (Board? volunteers?) of the output measures process you'll be using and the schedule.

Arrange for duplication of needed forms.

Record data elements already known or easily obtained:

- juvenile population
- holdings of juvenile materials
- library registration of juveniles
- annual juvenile program attendance (if this figure is not already available, it cannot be obtained for this spring since it requires an annual count.)

Phase 2 (First data collection):

Conduct circulation study

Conduct in-library materials use study

Phase 3 (Second data collection):

Conduct reference study (for Reference Fill Rates for Juveniles)

Conduct study of library visits

Measure 1: Juvenile Circulation per Juvenile Capita

FORMULA: Annual Circulation of Juvenile Materials divided by Juvenile Population.

DEFINITIONS:

OUTPUT MEASURE: Juvenile Circulation per Juvenile capita measures the number of juvenile items the library circulates in relation to the juvenile population of the community it primarily serves.

DATA ELEMENT: Annual Circulation of Juvenile Materials is the total circulation of materials classified or marked as "juvenile," whether borrowed by a juvenile or adult.

DATA ELEMENT: Juvenile Population is the population of age 13 and under within the jurisdiction that the library is intended primarily to serve. The definition of the jurisdiction population (also referred to as the community served or the population served) should be the same as that used by the library as a whole. In this study, the participants chose "age 13 and under" to correspond with ALA/ASLSC (Association for Library Services to Children) and ALA/YASD (Young Adult Services Division) age categories.

Many of the libraries have substantial amounts of use by persons not residing in the jurisdiction they are primarily mandated to serve. Librarians were asked to estimate the proportion of their use that came from outside the jurisdiction (by sampling registration files, circulation records, and from library visitor surveys) and to report that figure as a percentage of non-resident use. Tables reporting data on per capita measures have an additional column on non-resident use (% NON-RES.) to aid in the interpretation of the measure.

COLLECTING THE DATA ELEMENTS:

Annual Circulation of Juvenile Materials: This figure may be determined by keeping a tally of juvenile materials circulated for one week (recorded either at check-out or check-in) or by sampling a week's past circulation records. In either case, the week's sample should be multiplied by 50 to obtain an annual estimate.

For those libraries keeping a tally, a CIRCULATION COUNT FORM has been provided for recording juvenile circulation. Make enough copies of the form to record a week's circulation; each sheet should have a unique Sheet number. For each patron borrowing juvenile materials, place an "X" in the box to the left of the line, and "X" out the number of juvenile materials borrowed by that patron. If the patron has borrowed more than 19 juvenile materials, write the number of materials in the box to the right of the line.

To tally data on a sheet, write in the "X"d out numbers in the right-hand box of each line, add the numbers in the right-hand boxes, and enter the total at the upper right-hand corner. The totals on all the sheets are added to produce one week's juvenile circulation count. The week's circulation count is multiplied by 50 to produce the estimated annual juvenile circulation.

For some libraries, the easiest way to count juvenile circulation is to place book cards for materials circulated in separate Juvenile and Adult boxes (depending on the materials circulated) as the materials are checked out and to count the number of cards in each box at the end of the work period before filing the cards in the circulation file.

Juvenile Population: The figure may be obtained from national census data, local school officials, or local planning units. For those choosing to use census data to determine their juvenile population, see the CENSUS WORK FORM for sources of census figures for counties and how to calculate the percent juvenile in the county.

DATE ___/___/___ OMCS SHEET #_____

TIME ___:___ TOTAL_____

CIRCULATION COUNT FORM

PATRON (X out #)	NUMBER OF JUVENILE ITEMS BORROWED (X out #)																				more than 19 WRITE #
1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
13	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
14	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
15	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
17	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		

LIBRARY_____

CENSUS WORK FORM

Some libraries will be well acquainted with the use of U.S. census data and may be able to obtain data that fit perfectly with the library jurisdiction. For most libraries however, the best source of U.S. census data will be for the county in which they are located and will have to be used to approximate the proportion of their local population that are age 13 and under. Data for your county are located in the 1980 Census of the Population, Volume 1, Characteristics of the Population. In Chapter B, General Population Characteristics, use Table 46, which is "Persons by Age for Counties: 1980 and 1970." (Volume 1 is actually a multivolume set. You will want Part 51, which contains data for Wisconsin.)

Table 46 has two columns of age data for each county (See attached sample of Table 46.). We will use data from the left-hand column only, the column headed "1980." Transfer the numbers for those age 13 and under from the Table to the thin-lined boxes a through f below. Add the six numbers and place the total in the thick-lined box **A, Total juvenile**. Transfer the number of **Total persons** to the thick-lined box **B**. Enter the figure for your **Jurisdiction population** in the thick-lined box **C**.

The rest is done with a calculator.

Under 5 years------	a	
5 to 9 years-------	b	
10 years --------	c	
11 years --------	d	
12 years --------	e	
13 years --------	f	
Total juvenile-------	**A**	
Total persons--------	**B**	
Jurisdiction population----	**C**	

Divide **Total juvenile (A)** by **Total persons (B)** to obtain the **Proportion of juvenile in county (D)**. Multiply the **Jurisdiction population (C)** by **Proportion of juvenile in county (D)** to obtain an estimate of the **Juvenile population** in the jurisdiction (the number we want!).

$$\frac{\text{Total juvenile (A)}}{\text{Total persons (B)}} = \text{Proportion of juvenile in county (D)}$$

Prop. of juv. in county (D) x Juris. pop. (C) = Juvenile population

Table 46. Persons by Age for Counties: 1980 and 1970

[For meaning of symbols, see Introduction. For definitions of terms, see appendixes A and B]

Counties	Adams		Ashland		Barron		Bayfield		Brown		Buffalo		Burnett	
	1980	1970	1980	1970	1980	1970	1980	1970	1980	1970	1980	1970	1980	1970
Total persons	13 457	9 234	16 783	16 743	38 730	33 955	13 823	11 683	175 280	158 244	14 309	13 743	12 340	9 276
Under 5 years	810	663	1 236	1 366	3 069	2 482	989	889	13 692	15 835	1 074	1 145	858	627
Under 1 year	183	122	266	251	699	486	206	191	2 835	2 944	239	209	198	113
1 year	172	137	244	269	583	476	203	177	2 704	2 951	209	227	164	128
2 years	157	131	267	252	639	474	205	166	2 776	3 020	220	235	167	104
3 years	145	127	247	288	564	507	188	170	2 756	3 360	220	241	178	135
4 years	153	146	212	306	584	539	187	185	2 621	3 560	184	233	151	147
5 to 9 years	823	916	1 163	1 625	2 914	3 295	993	1 084	13 929	19 170	1 041	1 441	858	804
5 years	171	169	217	319	505	571	180	204	2 702	3 730	183	274	146	127
6 years	140	173	199	320	569	628	185	211	2 590	3 775	184	247	167	149
7 years	156	180	232	330	547	648	182	206	2 600	3 862	227	300	162	170
8 years	182	189	245	321	620	720	205	220	2 835	3 828	212	284	181	174
9 years	174	205	270	335	673	728	241	243	3 202	3 975	235	336	202	184
10 to 14 years	958	1 014	1 377	1 643	3 031	3 851	1 192	1 239	15 987	18 319	1 260	1 541	992	905
10 years	165	225	269	361	616	798	228	260	3 049	3 871	227	320	198	184
11 years	190	198	267	319	600	760	239	231	3 065	3 756	259	312	191	169
12 years	199	201	258	343	626	737	230	265	3 066	3 702	262	291	184	190
13 years	196	195	287	301	573	807	231	245	3 326	3 463	257	313	190	168
14 years	208	195	296	319	616	749	264	238	3 481	3 527	255	305	229	194
15 to 19 years	1 204	784	1 676	1 719	3 691	3 449	1 214	1 022	18 862	16 643	1 363	1 250	1 025	767
15 years	260	190	292	368	729	786	289	254	3 696	3 482	298	338	214	202
16 years	261	192	334	353	734	793	290	259	3 782	3 292	268	285	234	193
17 years	273	172	339	341	730	771	248	229	3 754	3 330	326	275	233	186
18 years	210	132	356	357	796	600	206	175	3 762	3 418	244	214	179	118
19 years	200	98	355	300	702	499	181	105	3 868	3 121	227	138	165	68
20 to 24 years	923	424	1 414	1 124	3 111	1 763	877	570	17 672	12 345	1 138	750	759	376
20 years	179	95	335	286	664	384	164	114	3 685	2 755	232	124	156	66
21 years	159	68	303	268	617	306	162	93	3 600	2 394	230	149	136	91
25 to 29 years	1 059	423	1 248	751	2 900	1 684	1 009	555	16 164	10 532	971	684	799	412
30 to 34 years	853	419	1 012	680	2 502	1 457	947	474	13 961	8 853	925	662	738	380
35 to 39 years	711	411	829	664	2 101	1 620	810	481	10 548	8 086	727	697	637	421
40 to 44 years	722	499	715	850	1 757	1 777	627	503	8 682	8 308	696	723	590	446
45 to 49 years	661	471	635	832	1 734	1 847	632	667	7 726	7 785	717	713	604	520
50 to 54 years	740	577	842	924	1 820	2 036	611	781	7 805	7 257	694	726	608	574
55 to 59 years	786	566	841	971	1 962	1 895	739	781	7 157	6 649	724	736	746	637
60 to 64 years	901	555	907	947	2 055	1 785	809	792	6 272	5 515	686	706	844	618
65 to 69 years	897	524	870	823	1 926	1 606	892	637	5 719	4 419	680	634	830	649
70 to 74 years	591	390	787	654	1 556	1 376	701	533	4 373	3 478	575	528	611	467
75 to 79 years	382	335	552	615	1 186	1 018	415	351	3 232	2 481	483	384	449	346
80 to 84 years	235	181	373	308	794	612	239	184	1 991	1 506	293	236	213	214
85 years and over	201	82	306	247	621	402	125	140	1 508	1 063	262	187	179	113
18 years and over	10 072	6 087	12 042	11 047	27 523	21 977	9 821	7 729	120 440	94 816	10 042	8 718	8 951	6 359
62 years and over	2 870	1 856	3 425	3 190	7 347	6 047	2 879	2 306	20 535	16 121	2 710	2 399	2 802	2 169
65 years and over	2 306	1 512	2 888	2 647	6 083	5 014	2 373	1 845	16 823	12 947	2 293	1 969	2 282	1 789
Median	35.8	34.7	31.1	31.1	31.3	31.6	33.3	35.1	27.3	23.7	31.6	30.5	36.2	39.4

Counties	Calumet		Chippewa		Clark		Columbia		Crawford		Dane		Dodge	
	1980	1970	1980	1970	1980	1970	1980	1970	1980	1970	1980	1970	1980	1970
Total persons	30 867	27 604	52 137	47 717	32 910	30 361	43 222	40 150	16 556	15 252	323 545	290 272	75 064	69 004
Under 5 years	2 601	2 992	4 191	4 437	2 705	2 575	3 135	3 307	1 302	1 295	20 379	25 272	5 679	5 856
Under 1 year	550	589	925	918	557	508	656	669	280	235	4 521	5 345	1 198	1 114
1 year	520	556	857	898	565	468	615	661	252	259	4 072	5 069	1 119	1 181
2 years	554	594	799	819	542	483	652	638	250	249	4 106	4 774	1 156	1 158
3 years	501	633	821	838	505	533	608	639	268	261	3 873	5 023	1 092	1 189
4 years	476	620	789	964	536	583	604	700	252	291	3 807	5 061	1 114	1 214
5 to 9 years	2 576	3 561	4 282	5 358	2 708	3 289	3 224	3 998	1 311	1 664	20 687	28 288	5 593	7 097
5 years	526	696	796	1 010	543	578	625	740	257	317	3 944	5 406	1 105	1 387
6 years	466	702	842	1 083	497	654	606	744	246	296	3 726	5 596	1 004	1 365
7 years	478	720	799	1 075	530	665	576	819	242	359	3 982	5 701	1 070	1 398
8 years	532	724	847	1 052	543	670	643	877	286	344	4 146	5 781	1 156	1 424
9 years	574	719	998	1 138	595	722	774	818	280	348	4 889	5 804	1 258	1 523
10 to 14 years	3 119	3 345	4 900	5 516	3 050	3 640	3 641	4 425	1 500	1 709	23 738	27 787	6 392	7 627
10 years	628	693	1 018	1 117	593	760	747	909	287	327	5 053	5 844	1 281	1 645
11 years	600	673	941	1 126	578	719	725	886	290	339	4 682	5 636	1 236	1 498
12 years	610	655	939	1 121	609	722	641	857	303	361	4 493	5 541	1 297	1 486
13 years	654	661	977	1 097	616	732	742	898	296	336	4 776	5 502	1 288	1 525
14 years	627	663	1 025	1 055	654	707	786	875	324	346	4 734	5 264	1 290	1 473
15 to 19 years	3 401	2 784	5 259	4 719	3 198	2 832	3 926	3 666	1 636	1 476	32 925	31 575	6 882	6 177
15 years	700	641	1 134	1 094	681	729	815	862	359	364	5 181	5 439	1 463	1 425
16 years	730	620	1 169	1 028	756	711	838	894	360	358	5 259	5 130	1 438	1 378
17 years	755	603	1 105	1 070	718	664	908	823	380	357	5 515	5 112	1 472	1 319
18 years	651	518	960	841	567	431	733	666	296	243	7 443	7 202	1 278	1 131
19 years	565	402	891	686	476	297	632	421	241	154	9 527	8 692	1 231	924
20 to 24 years	2 659	1 725	4 131	3 089	2 327	1 338	3 160	2 290	1 145	705	44 843	38 821	6 246	4 332
20 years	585	340	827	648	468	258	645	420	229	143	9 550	8 977	1 242	846
21 years	538	333	822	600	409	252	596	409	216	130	9 576	8 938	1 203	825
25 to 29 years	2 479	1 695	4 150	2 578	2 314	1 408	3 214	2 225	1 215	743	37 887	24 700	6 309	4 057
30 to 34 years	2 260	1 478	3 717	2 378	1 957	1 351	3 122	2 125	1 093	664	29 930	16 753	5 376	3 863
35 to 39 years	1 838	1 348	2 925	2 334	1 674	1 412	2 508	2 074	879	690	20 465	14 646	4 306	3 652
40 to 44 years	1 471	1 443	2 433	2 525	1 519	1 582	2 288	2 181	756	819	14 972	14 513	3 886	3 891
45 to 49 years	1 442	1 375	2 273	2 553	1 513	1 619	2 133	2 174	722	825	13 649	14 000	3 505	3 957
50 to 54 years	1 450	1 314	2 498	2 524	1 594	1 652	2 213	2 206	823	877	13 579	12 374	3 720	3 806
55 to 59 years	1 345	1 179	2 398	2 328	1 627	1 733	2 193	2 035	825	850	12 861	10 648	3 743	3 544
60 to 64 years	1 239	968	2 348	2 072	1 600	1 580	2 146	1 844	831	786	10 594	8 981	3 467	3 106
65 to 69 years	1 036	774	2 120	1 731	1 629	1 308	1 956	1 693	803	701	8 637	7 176	3 118	2 627
70 to 74 years	770	656	1 711	1 402	1 318	1 165	1 550	1 437	614	627	6 794	5 799	2 545	2 157
75 to 79 years	536	444	1 304	1 128	967	899	1 200	1 189	501	444	5 089	4 312	1 891	1 587
80 to 84 years	358	320	797	615	643	613	842	734	352	250	3 510	2 724	1 311	970
85 years and over	287	203	690	430	567	365	771	547	248	127	3 006	1 903	1 095	698
18 years and over	20 386	15 842	35 346	29 214	22 292	18 753	30 661	25 841	11 344	9 505	242 786	193 244	53 027	44 302
62 years and over	3 719	2 953	8 005	6 496	6 136	5 274	7 604	6 691	3 010	2 597	33 204	27 102	12 035	9 889
65 years and over	2 987	2 397	6 622	5 306	5 124	4 350	6 319	5 600	2 518	2 149	27 036	21 914	9 960	8 039
Median	27.1	23.3	29.0	26.4	30.4	30.4	32.0	30.4	30.7	30.3	27.4	24.1	30.4	29.2

BEST COPY AVAILABLE

Table 1. JUVENILE CIRCULATION PER CAPITA

LIBRARY	% NON-RES.	SCORE
M		1.51
S		7.69
P		11.96
K		11.97
D		12.69
O		14.37
T		14.86
N	10%	15.49
G	22%	15.95
L		16.12
Q	2%	16.44
B		16.54
F		18.01
I		18.74
J		25.34
A	13%	30.47
R	11%	31.92
C	51%	32.28
H		33.83
E		
COUNT		19
MINIMUM		1.51
MEDIAN		16.12
MAXIMUM		33.83
AVERAGE		18.22

Measure 2: In-library use of Juvenile Materials per Juvenile Capita:

FORMULA: In-library use of Juvenile Materials divided by Juvenile Population.

DEFINITIONS:

OUTPUT MEASURE: In-library use of Juvenile Materials per Juvenile Capita reports the estimated annual number of juvenile materials used by patrons in the library, divided by the Juvenile Population.

DATA ELEMENT: In-library use of Juvenile Materials is the number of all materials classified or marked as "juvenile" that are removed from their shelf locations by either staff or users for use within the library.

COLLECTING THE DATA ELEMENTS:

In-library use of Juvenile Materials: During a sample week, the procedure involves counting the number of juvenile materials that are to be replaced on shelves or in files, excluding those returned from outside circulation (See In-Library Materials Use Log on OMPL p. 18.). If juvenile materials are shelved in a separate location, the procedures in the OMPL manual may be used. If juvenile materials are inter-shelved and are identifiable, the modified IN-LIBRARY MATERIALS USE LOG provided in this publication should be used. The modified IN-LIBRARY MATERIALS USE LOG allows for an in-library materials use study for the entire library, with a separate count of juvenile and non-juvenile materials.

Some libraries observed that patrons were inhibited by the survey and removed fewer materials than they would have without the survey or that patrons reshelved materials in spite of the survey. Some suggestions were that the library could put laundry baskets at strategic places in the library for the deposit of examined items, the SURVEY ALERT POSTER in this publication could be used or adapted, or volunteer "greeters" could explain the survey to patrons as they enter the library or children's room.

IN-LIBRARY MATERIALS USE LOG

OMCS

(Number of items)

LIBRARY_____ DATE__/__/__

SHEET #_____

HOUR		:00	:00	:00	:00	:00	:00	:00	:00	TOTALS
BOOKS	JUVENILE									
	NON-JUVENILE									
MAGAZINES	JUVENILE									
	NON-JUVENILE									
PAMPHLET FILES	JUVENILE									
	NON-JUVENILE									
SOUND RECORDINGS	JUVENILE									
	NON-JUVENILE									
NEWSPAPERS	JUVENILE									
	NON-JUVENILE									
CONTROLLED MATERIALS	JUVENILE									
	NON-JUVENILE									
OTHER	JUVENILE									
	NON-JUVENILE									
TOTALS	JUVENILE									
	NON-JUVENILE									
	TOTAL									

OMCS

PLEASE!

USE THE BOOKS, BUT . . .

DO NOT

PUT THEM BACK TODAY!

Thanks.

Table 2. IN-LIB. USE OF JUVENILE MATERIALS/J.C.

LIBRARY	% NON-RES.	SCORE
S		1.54
G	22%	1.91
M		2.08
L		2.13
P		2.75
O		5.19
K		5.76
Q	2%	7.54
H		7.65
N	10%	8.34
T		8.60
I		9.24
J		10.81
B		12.07
E		16.47
R	11%	21.78
A	13%	29.05
D		33.82
C	51%	57.83
F		
MINIMUM		1.54
MEDIAN		8.34
MAXIMUM		57.83
COUNT		19
AVERAGE		12.87

Measure 3: Juvenile Library Visits per Juvenile Capita:

FORMULA: Annual Number of Juvenile Library Visits divided by Juvenile Population.

DEFINITIONS:

OUTPUT MEASURE: Juvenile Library Visits per Juvenile Capita indicates the actual or estimated Annual Number of Juvenile Library Visits divided by the Juvenile Population; that is, if all children in the jurisdiction visited the library an equal number of times during the year, each one would have made x visits.

DATA ELEMENT: Annual Number of Juvenile Library Visits is an estimate of the number of juveniles who come into a library facility (either the building or the Children's Services Room) during the course of a year.

For future data collection, librarians proposed reporting on three output measures related to visits:

Juvenile Library Visits per Juvenile Capita
Juvenile Visits to Juvenile Room per Juvenile Capita
Total Visits to Juvenile Room per Capita

COLLECTING THE DATA ELEMENTS:

Annual Number of Juvenile Library Visits: Procedures for sampling time periods in which to do the counting and for calculating the annual estimate are included in the OMPL manual (pp. 25 - 28). If a library cannot select sample time periods without library programs, the number of people attending the program during the sample time period should be subtracted from the number of visitors for that period. The people attending the program will be counted in the program attendance for the month. The persons doing the counting of visits will have to make a judgement of which visitors are age 13 and under.

A LIBRARY VISITS TALLY SHEET has been provided for recording visits during sample periods. Each form can record up to 100 visitors, juvenile or adult, by placing an "X" in either the "JUV." or "NON-JUV" box of each numbered line. When all of the numbered lines have been used, the Xs in the "JUV." columns should be counted and the count entered at TOTAL JUVENILE. Then the Xs in the "NON-JUV." columns should be counted and the count entered at TOTAL NON-JUVENILE. These totals should add to 100 (except for page #1 on which they should add to 99). Copies of the form should be made so that all visitors during the sampled times can be recorded. Each form should have a unique page number. Page #1 of the form will record 99 transactions, and the 00 space on the form should not be used. For page #2 of the form, place a "1" in the underlined area of the 00 space and a "1" in the underlined area of the 99 space to indicate transactions 100 to 199, as illustrated below:

UPPER LEFT OF FORM

ITEM NO.	JUV.	NON-JUV.
1 00		
01		
02		

LOWER RIGHT OF FORM

96		
97		
98		
1 99		

Page #3 of the form should contain transactions 200 to 299, and so on.

Alternatively, a ballot box can be placed immediately inside the entrance with two piles of "ballots" of two colors and a large sign indicating that visitors age 13 and younger should place one color of ballot in the box and visitors age 14 and older should place the other color of ballot in the box. Libraries using this method should observe closely until they are confident that the process is working.

For tabulating the Annual Number of Juvenile Library Visits, a modified ANNUAL NUMBER OF JUVENILE LIBRARY VISITS WORKSHEET has been included in this publication.

LIBRARY VISITS TALLY SHEET

OMCS

LIBRARY_____ DATE_____

For each visitor to the library, place an X in either the JUV. VISITOR or the NON-JUV. VISITOR column.

PAGE NO._____

VISITOR NO.	JUV.	NON-JUV.	VISITOR NO.	JUV.	NON-JUV.	VISITOR NO.	JUV.	NON-JUV.
___00								
01			34			67		
02			35			68		
03			36			69		
04			37			70		
05			38			71		
06			39			72		
07			40			73		
08			41			74		
09			42			75		
10			43			76		
11			44			77		
12			45			78		
13			46			79		
14			47			80		
15			48			81		
16			49			82		
17			50			83		
18			51			84		
19			52			85		
20			53			86		
21			54			87		
22			55			88		
23			56			89		
24			57			90		
25			58			91		
26			59			92		
27			60			93		
28			61			94		
29			62			95		
30			63			96		
31			64			97		
32			65			98		
33			66			___99		

TOTAL JUVENILE VISITORS_____ TOTAL NON-JUVENILE VISITORS_____

TOTAL JUVENILE VISITORS and TOTAL NON-JUVENILE VISITORS should add to 100 (99 on page #1).

ANNUAL NUMBER OF JUVENILE LIBRARY VISITS WORKSHEET, p. 1

Weekday Mornings

1 Record total of all weekday morning juvenile visits made during the sample period. (1)_____

2 Record number of weekday morning hours in the sample period. (2)_____

3 Divide (1) by (2) to obtain average number of weekday morning juvenile visits per hour. (3)_____

4 Record the number of weekday morning hours the library is open to the public each week. (4)_____

5 Multiply (4) x (3) to obtain the estimated number of weekday morning juvenile visits per week. (5)_____

Weekday Afternoons

6 Record total of all weekday afternoon juvenile visits made during the sample period. (6)_____

7 Record number of weekday afternoon hours in the sample period. (7)_____

8 Divide (6) by (7) to obtain average number of weekday afternoon juvenile visits per hour. (8)_____

9 Record the number of weekday afternoon hours the library is open to the public each week. (9)_____

10 Multiply (9) x (8) to obtain the estimated number of weekday afternoon juvenile visits per week. (10)_____

Weekday evenings

11 Record total of all weekday evening juvenile visits made during the sample period. (11)_____

12 Record number of weekday evening hours in the sample period. (12)_____

13 Divide (11) by (12) to obtain average number of weekday evening juvenile visits per hour. (13)_____

14 Record the number of weekday evening hours the library is open to the public each week. (14)_____

15 Multiply (14) x (13) to obtain the estimated number of weekday evening juvenile visits per week. (15)_____

ANNUAL NUMBER OF JUVENILE LIBRARY VISITS WORKSHEET, p. 2

Weekends

16 Record total of all weekday morning juvenile visits made during the sample period. (16)_____

17 Record number of weekday morning hours in the sample period. (17)_____

18 Divide (16) by (17) to obtain average number of weekday morning juvenile visits per hour. (18)_____

19 Record the number of weekday morning hours the library is open to the public each week. (19)_____

20 Multiply (19) x (18) to obtain the estimated number of weekday morning juvenile visits per week. (20)_____

Calculation

21 Add the figures from (5), (10), (15), and (20) to obtain the estimated number of weekly visits. (21)_____

22 Multiply (21) by 4.2 to obtain the average number of juvenile visits per month. (22)_____

23 Record the total number of persons attending in-library juvenile programs for the entire month during which the juvenile library visits count is taking place. (23)_____

24 Add (22) + (23) to obtain the estimated total number of juvenile library visits monthly. (24)_____

25 Multiply (24) x 12 to obtain the estimated Annual Number of Juvenile Library Visits. (25)_____

Table 3. JUVENILE LIBRARY VISITS/J.C.

LIBRARY	% NON-RES.	SCORE
L		1.18
S		1.49
M		2.35
O		3.07
K		3.36
G	22%	4.64
E		5.21
F		5.37
N	10%	6.97
J		7.54
B		7.56
Q		9.98
H		9.99
C	51%	10.33
D		14.45
A	13%	20.19
I		
P		
R	11%	
T		
MINIMUM		1.18
MEDIAN		6.17
MAXIMUM		20.19
COUNT		16
AVERAGE		7.11

Measure 4: Annual Juvenile Program Attendance per Juvenile Capita:

FORMULA: Annual Juvenile Program Attendance divided by Juvenile Population.

DEFINITIONS:

OUTPUT MEASURE: Annual Juvenile Program Attendance per Juvenile Capita reports the annual attendance by persons of all ages at programs intended for juveniles provided by the library, divided by the Juvenile Population. The definition of a library program is the same as that given on page 33 of the OMPL manual.

DATA ELEMENT: Annual Juvenile Program Attendance is an actual count over the course of a year of the attendance at programs intended for juveniles aged 13 and under.

COLLECTING THE DATA ELEMENTS:

A PROGRAM ATTENDANCE LOG is provided on p. 34 of OMPL. For management information, librarians may want to add a column for recording preparation time. Since this data element is an actual count of the attendance at each program, a full year is required for the data collection.

Table 4. ANNUAL JUVENILE PROGRAM ATTENDANCE/J.C.

LIBRARY	% NON-RES.	SCORE
O		0.45
S		0.45
M		0.62
N	10%	0.78
K		0.85
G	22%	1.08
I		1.12
T		1.12
Q		1.22
P		1.34
B		1.39
H		1.69
D		1.79
E		1.80
J		2.20
R	11%	3.23
C	51%	7.09
A	13%	
F		
L		
MINIMUM		0.45
MEDIAN		1.22
MAXIMUM		7.09
COUNT		17
AVERAGE		1.66

Measure 6: Reference Fill Rate for Juveniles:

FORMULA: Number of Reference Transactions Completed for Juveniles divided by Number of Reference Transactions for Juveniles.

DEFINITIONS:

OUTPUT MEASURE: Reference Fill Rate for Juveniles is the proportion of reference transactions for juveniles age 13 and under that are completed within the same working day.

DATA ELEMENT: Number of Reference Transactions for Juveniles counts all requests for information, in person or by mail or telephone, from a juvenile aged 13 or under, which require the use of library materials or the professional judgement of the librarian to answer.

Number of Reference Transactions Completed for Juveniles: Whether or not the transaction is completed is also left to the judgement of the librarian. The reference transaction must be completed within the same working day it was initiated to be counted as completed for this measure.

Materials delivery was considered to be a separate unit of service from answering of reference questions. A question regarding whether a library owns a work is counted as completed if it is answered, whether the answer is "yes" or "no." However, it was observed that if a question regarding ownership or availability of material would be answered by "no," satisfactory service would require that an inter-library loan request, a reserve for the item, or purchase of the item would follow, resulting in the question not being resolved for that day.

Because this measure, as defined, does not tap important aspects of the service, four additional measures were proposed for future testing and data collection:

- Reference Fill Rate for Questions asked by, on behalf of, and for use with Juveniles.
- Reference Fill Rate for Questions answered by the Juvenile Services Staff or Collection.
- Reference Transactions per capita for Questions asked by, on behalf of, and for use with Juveniles.
- Reference Transactions per capita for Questions answered by the Juvenile Services Staff or Collection.

(Procedures for Reference Transactions per capita are on pp. 39-42 of the OMPL manual.)

COLLECTING THE DATA ELEMENTS:

Instructions for conducting the Reference Fill Rate study are on pp. 45-49 of the OMPL manual. In situations where a separate assessment of service to juveniles is not possible, two Reference Tally Sheets (OMPL p. 46) of different color should be used, one labeled "JUVENILE" and one labeled "ADULT." These tally sheets would need to be used at each service desk in the library. It would be most efficient for the library if this study of reference service for juveniles were done as part of a general library Reference Fill Rate study. The judgement of the age of the inquirer is made by the librarian.

Table 5. REFERENCE FILL RATE FOR JUVENILES

LIBRARY	SCORE
M	60%
N	69%
C	71%
G	71%
L	72%
K	74%
J	74%
D	75%
A	75%
T	78%
I	80%
S	85%
P	86%
B	87%
H	87%
R	88%
O	92%
E	94%
F	
Q	
MINIMUM	60%
MEDIAN	76%
MAXIMUM	94%
COUNT	18
AVERAGE	79%

Measure 10: Library Registration of Juveniles as a Percentage of Juvenile population:

FORMULA: Library Registration of Juveniles divided by Juvenile Population.

DEFINITIONS:

OUTPUT MEASURE: This measure represents the proportion of the juveniles in the community currently registered with the library. For this measure to have most meaning, juvenile registered users must be looked at as a percentage of those persons eligible to be registered users. Therefore, those libraries with family cards will not be able to use this measure; those libraries with a minimum age for registration should divide juvenile registration by the number of juveniles in their community between the minimum age and age 13.

DATA ELEMENT: Library Registration of Juveniles is the number of persons aged 13 and under that are currently registered with the library.

COLLECTING THE DATA ELEMENTS:

If the library cannot identify which registrations are for juveniles and if the age of the person registered is part of the registration records, a random sample of 100 cards can be pulled from the current registration file and the proportion of juveniles could be estimated by dividing the number in the sample that were for juveniles by the total in the sample (100). Multiplying the total number of registrations by the estimated proportion of juvenile registrations would give an estimate of Library Registration of Juveniles. If the library has a minimum age for registration, then the proper population figure would be those between the minimum age and age 13. Use a copy of the CENSUS WORK FORM to determine the population of juveniles between the minumum age and age 13.

Table 6. LIBRARY REGISTRATION OF JUVENILES AS A % OF J.P.

LIBRARY	SCORE
P	31%
M	41%
I	42%
J	43%
K	45%
N	52%
S	56%
O	57%
T	57%
B	58%
Q	62%
R	64%
H	72%
L	76%
C	77%
E	79%
G	81%
F	84%
A	91%
D	
MINIMUM	31%
MEDIAN	58%
MAXIMUM	91%
COUNT	19
AVERAGE	61%

Measure 11: Turnover Rate of Juvenile Materials:

FORMULA: Annual Circulation of Juvenile Materials divided by Holdings of Juvenile Materials.

DEFINITIONS:

OUTPUT MEASURE: Turnover Rate of Juvenile Materials measures the activity level of the library's juvenile collection. It indicates the number of times each item of juvenile library material would have circulated during the year if circulation had been spread evenly throughout the juvenile collection.

DATA ELEMENT: Holdings of Juvenile Materials is the number of cataloged items (not number of titles), plus paperback holdings even if uncataloged, that are classified or marked as "juvenile."

COLLECTING THE DATA ELEMENTS:

The definition of this set of library materials will differ from library to library. Methods for defining juvenile materials may include using those materials shelved separately for service to juveniles, using those materials labeled as juvenile materials, or making an estimation based on the proportion of materials ordered to serve the juvenile population.

Table 7. TURNOVER RATE OF JUVENILE MATERIALS

LIBRARY	SCORE
M	1.13
C	1.67
O	1.92
S	2.18
D	2.23
K	2.54
P	2.58
F	2.93
Q	3.35
N	3.42
A	3.62
L	3.75
G	3.80
B	3.81
T	3.90
H	4.20
I	4.32
R	4.87
J	4.97
E	
MINIMUM	1.13
MEDIAN	3.42
MAXIMUM	4.97
COUNT	19
AVERAGE	3.22

Library_____

DATA ELEMENTS SUMMARY SHEET

Data Element Name	Source	Number	Used in these Measures
a ANNUAL CIRCULATION OF JUVENILE MATERIALS	based on sample	_____	Juvenile Circulation per Juv. Capita Turnover Rate of Juvenile Materials
b JUVENILE POPULATION	census data, planning reports	_____	Juvenile Circulation per Juv. Capita In-library use of Juvenile Mat./J.C. Juvenile Library Visits/P.C. Annual Juv. Program Attendance/J.C. Lib. Reg. of Juveniles as a % of J. P.
c ANNUAL IN-LIBRARY USE OF JUVENILE MATERIALS	based on sample	_____	In-lib. Use of Juvenile Materials
d ANNUAL NUMBER OF JUVENILE LIBRARY VISITS	based on sample	_____	Juvenile Library Visits/J.C.
e ANNUAL JUVENILE PROGRAM ATTENDANCE	actual count	_____	Annual Juvenile Program Attend.
f NUMBER OF REF. TRANS. COMP. FOR JUVENILES	based on sample	_____	Reference Fill Rate for Juveniles
g NUMBER OF REF. TRANS. FOR JUVENILES	based on sample	_____	Reference Fill Rate for Juveniles
h LIBRARY REGISTRATION OF JUVENILES	actual count or based on sample	_____	Lib. Reg. of Juveniles as a % of J. P.
i HOLDINGS OF JUVENILE MATERIALS	library records	_____	Turnover Rate of Juvenile Materials

Library_____

OUTPUT MEASURES SUMMARY SHEET

	Measure		Data Elements	Calculation		Result
1	Juvenile Circulation per Juv. Capita	a	ANNUAL CIRC. OF JUV. MATLS	a ÷ b	=	_____
		b	JUVENILE POPULATION			
2	In-lib. Use of Juvenile Materials/J.C.	c	ANNUAL IN-LIB. USE OFJUV. MATLS	c ÷ b	=	_____
		b	JUVENILE POPULATION			
3	Juvenile Library Visits/J.C.	d	ANNUAL # OF JUV. LIB. VISITS	d ÷ b	=	_____
		b	JUVENILE POPULATION			
4	Annual Juv. Program Attendance/J.C.	e	ANNUAL JUV. PROGRAM ATTEND.	e ÷ b	=	_____
		b	JUVENILE POPULATION			
5	Reference Fill Rate for Juveniles	f	# OF REF. TRANS. COMP. FOR JUV.	f ÷ g x 100	=	_____%
		g	# OF REF. TRANS. FOR JUVENILES			
6	Lib. Reg. of Juveniles as a % of J. P.	h	LIBRARY REGISTRATION OF JUV.	h ÷ b x 100	=	_____%
		b	JUVENILE POPULATION			
7	Turnover Rate of Juvenile Materials	a	ANNUAL CIRC. OFJUV. MATLS	a ÷ i	=	_____
		i	HOLDINGS OF JUVENILE MATLS			

(Sample form)

REPORT FORM ON EXPERIENCE IN COLLECTING DATA ELEMENTS

DATA ELEMENT: Library Registration of Juveniles

LIBRARY:_____ DATE:_____

DEFINITION USED: _____

_____

_____

SOURCE OF DATA ELEMENT: _____

_____

_____

PROBLEMS IN OBTAINING THE DATA ELEMENT: _____

_____

_____

(Sample form)

GENERAL OBSERVATIONS ON THE DATA COLLECTION EXPERIENCE AND SUGGESTIONS FOR IMPROVEMENTS AND SHORT-CUTS:

LIBRARY:_____ DATE:_____

_____

_____

_____

_____

POSITIVE OBSERVATIONS ON THE DATA COLLECTION EXPERIENCE

- We had fun during the in-library materials use week. It brought a great deal of attention to an area neglected by staff and public alike.
- All in all, our staff was supportive and conscientious.
- "Collecting the data during the sample week has led us to be more observant of patrons and how they use library materials."
- "We enjoyed doing the output measures and feel our board of trustees will be interested in the results, particularly in-library use of materials and library visits."
- "I enjoyed the experience! By doing this study, I was made more aware of the statistics that need to be kept and am already thinking of ways to use these figures. I feel that you really have to go through the procedure once before you are ready to ask intelligent questions."
- "We gained a more practical political outlook on statistics. We gained insight into how we could cut our daily record keeping while gaining more accurate and useful statistics on a twice-yearly basis."
- "From the data collected, we could also calculate measure #5 from the manual: Juvenile Reference Transactions/Juvenile capita = 0.32."
- "Think that doing it again would go easier as patrons would begin to think 'Oh, that again' and know better what to do."
- "It was a lot less painful than I thought it would be. I found the data collection well worth the effort. Based on the output measures figures I have obtained, I'm motivated to set up some measurable objectives or goals for the next year and am eager to perform output measures a year from now to see how things have changed."

Table 8. SUMMARY TABLE OF OUTPUT MEASURES FOR CHILDREN'S SERVICES

OUTPUT MEASURES	MINIMUM	MEDIAN POINT (50%)	MAXIMUM	COUNT	AVERAGE
JUVENILE CIRCULATION PER CAPITA	1.51	16.12	33.83	19	**18.22**
IN-LIB. USE OF JUVENILE MATERIALS/J.C.	1.54	8.34	57.83	19	**12.87**
JUVENILE LIBRARY VISITS/J.C.	1.18	6.17	20.19	16	**7.11**
ANNUAL JUV. PROGRAM ATTENDANCE/J.C.	0.45	1.22	7.09	17	**1.66**
REFERENCE FILL RATE FOR JUVENILES	60%	76%	94%	18	**79%**
LIB. REG. OF JUVENILES AS A % OF J.P.	31%	58%	91%	19	**61%**
TURNOVER RATE OF JUVENILE MATERIALS	1.13	3.42	4.97	19	**3.22**

Table 9. OUTPUT MEASURES DATA REPORTED BY SINGLE-OUTLET PUBLIC LIBRARIES – JUNE 1984*

OUTPUT MEASURES	MINIMUM	MEDIAN POINT (50%)	MAXIMUM	COUNT	AVERAGE
CIRCULATION PER CAPITA	1.44	5.60	13.80	78	5.83
IN-LIBRARY USE PER CAPITA	0.05	1.96	9.30	37	2.34
LIBRARY VISITS PER CAPITA	0.75	2.85	9.10	47	3.34
PROGRAM ATTENDANCE/P.C.	0.03	0.20	0.48	25	0.21
REFERENCE FILL RATE	9%	70%	95%	60	67%
REGISTRATION AS % OF POPULATION	5%	35%	94%	53	41%
TURNOVER RATE	0.60	2.40	9.85	75	2.68

* These are data reported by single-facility public libraries or branches in 1983. Full data can be found in Douglas L. Zweizig, "Any Number Can Play: The First National Report of Output Measures Data," Public Libraries, Summer 1985, 50-53.

Table 10. DATA ELEMENTS AND OUTPUT MEASURES FOR INDIVIDUAL LIBRARIES

	LIBRARY	A	B	C	D	E
	Estimated % of non-resident use	13%		51%		
	DATA ELEMENTS					
a	annual circulation of juvenile materials	31,200	190,186	25,150	13,024	
b	juvenile population	1,024	11,497	779	1,026	4,383
c	annual in-library use of juvenile materials	29,750	138,750	45,050	34,700	72,200
d	annual number of juvenile library visits	20,674	86,928	8,048	14,826	22,828
e	annual juvenile program attendance		16,005	5,522	1,836	7,908
f	number of ref. trans. comp. for juveniles	49	104	17	1,800	68
g	number of ref. trans. for juveniles	65	120	24	2,400	72
h	library registration of juveniles	602	6,648	1,311		3,480
i	holdings of juvenile materials	8,615	49,918	15,078	5,836	62,444
	OUTPUT MEASURES					
1	JUVENILE CIRCULATION PER CAPITA	30.47	16.54	32.28	12.69	
2	IN-LIB. USE OF JUVENILE MATERIALS/J.C.	29.05	12.07	57.83	33.82	16.47
3	JUVENILE LIBRARY VISITS/J.C.	20.19	7.56	10.33	14.45	5.21
4	ANNUAL JUV. PROGRAM ATTENDANCE/J.C.		1.39	7.09	1.79	1.80
5	REFERENCE FILL RATE FOR JUVENILES	75%	87%	71%	75%	94%
6	LIB. REG. OF JUVENILES AS A % OF J.P.	91%	58%	77%		79%
7	TURNOVER RATE OF JUVENILE MATERIALS	3.62	3.81	1.67	2.23	

Table 10. (continued)

	LIBRARY	F	G	H	I	J	K	L	M
Est. % non-res.			22%						
DATA ELEMENTS									
a	circulation	30,150	167,240	225,000	481,829	157,489	310,134	129,257	23,923
b	population	1,674	10,483	6,650	25,710	6,214	25,909	8,018	15,800
c	in-library use		20,050	50,900	237,450	67,150	149,200	17,100	32,900
d	library visits	14,489	48,630	66,444		46,872	86,960	9,450	37,118
e	program attend.		11,309	11,213	28,799	13,654	21,934		9,784
f	ref. tr. comp.		108	104	4,800	124	395	71	60
g	# of ref. trans.		152	120	6,000	167	536	99	100
h	registration	1,401	8,509	4,800	10,853	2,681	11,659	6,112	6,480
i	holdings	10,284	43,984	53,555	111,573	31,669	122,200	34,487	21,198
OUTPUT MEASURES									
1	CIRC PER CAPITA	18.01	15.95	33.83	18.74	25.34	11.97	16.12	1.51
2	IN-LIB. USE/J.C.		1.91	7.65	9.24	10.81	5.76	2.13	2.08
3	VISITS/J.C.	5.37	4.64	9.99		7.54	3.36	1.18	2.35
4	ATTEND./J.C.		1.08	1.69	1.12	2.20	0.85		0.62
5	REF. FILL RATE		71%	87%	80%	74%	74%	72%	60%
6	LIB. REG. AS A %	84%	81%	72%	42%	43%	45%	76%	41%
7	TURNOVER RATE	2.93	3.80	4.20	4.32	4.97	2.54	3.75	1.13

Table 10. (continued)

	LIBRARY	N	O	P	Q	R	S	T
Est. % non-res.		10%			2%	11%		
DATA ELEMENTS								
a	circulation	46,219	105,000	47,799	257,837	305,437	43,633	173,650
b	population	2,984	7,305	3,998	6,609	9,568	5,673	11,685
c	in-library use	24,900	37,900	11,000	49,850	208,350	8,750	100,500
d	library visits	20,800	22,447		65,984		8,450	
e	program attend.	2,338	3,266	5,356	8,087	30,869	2,580	13,109
f	ref. tr. comp.	4,100	176	30		88	1,785	78
g	# of ref. trans.	5,950	192	35		100	2,100	100
h	registration	1,550	4,138	1,239	4112	6,111	3,200	6,619
i	holdings	13,500	54,823	18,546	76,898	62,754	20,054	44,496
	OUTPUT MEASURES							
1	CIRC PER CAPITA	15.49	14.37	11.96	16.44	31.92	7.69	14.86
2	IN-LIB. USE/J.C.	8.34	5.19	2.75	7.54	21.78	1.54	8.60
3	VISITS/J.C.	6.97	3.07		9.98		1.49	
4	ATTEND./J.C.	0.78	0.45	1.34	1.22	3.23	0.45	1.12
5	REF. FILL RATE	69%	92%	86%		88%	85%	78%
6	LIB. REG. AS A %	52%	57%	31%	62%	64%	56%	57%
7	TURNOVER RATE	3.42	1.92	2.58	3.35	4.87	2.18	3.90